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Notice of Allowability	Application No.	Applicant(s)	
	10/536,858	RESONI ET AL.	
	Examiner	Art Unit	
	Rip A. Lee	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to September 25, 2006.
2. ☒ The allowed claim(s) is/are 1-7 and 9.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>06-15-2006</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Page 2

Claim 1, line 12 delete "or"

Claim 1, line 18 replace "and" with "or"

Page 3

Claim 1, line 9 replace "unsaturaded" with "unsaturated"

Page 5

Claim 7, line 15 delete "or"

Claim 7, line 21 replace "and" with "or"

Page 7

Claim 7, line 1 delete "or"

Claim 7, line 7 replace "and" with "or"

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: Claims 1-7 and 9 are allowed over the closest references cited below.

The present invention is drawn to a process for preparing 1-butene polymers in the presence of a catalyst system obtained by contacting at least one metallocene of formula (I) and an aluminoxane or a compound that forms an alkylmetallocene cation. Notably, metallocene of formula I contains a bridged bisindenyl core wherein substituents R⁴ and R⁵ are linked to form a saturated or unsaturated C₃-C₇ membered ring.

Another aspect of the invention is drawn to a metallocene of formula (IIb) and a process for making said metallocene. The metallocene contains a bridged *bisindacenyl* ligand set.

Chen *et al.* (U.S. 6,084,115) teaches diene complexes containing a Me₂Si-bridged *bisindacenyl* ligand set or a *bis*(tetramethylbenzo[*f*]indenyl) ligand set. Such compounds have been excluded from the amended claims. The patent does not teach or fairly disclose use of the compounds of the instant claims, nor is there suggestion to use compounds specifically in a process for making butene polymers.

McAdon *et al.* (U.S. 5,965,756 and 6,034,022) discloses constrained geometry complexes containing (un)substituted indacenyl and tetramethylbenzo[*f*]indenyl ligands. Clearly, these compounds do not meet the structural requisites set forth in the instant claims.

Morizono *et al.* (U.S. 6,143,827) contemplates use of variously substituted Me₂Si-bridged *bis*(benzo[*f*]indenyl)zirconium chlorides as catalyst components for production of ethylene-alpha olefin-nonconjugated diene polymers. The subject matter of the instant claims is neither disclosed nor obvious over the teachings of this patent.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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December 1, 2006


DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700